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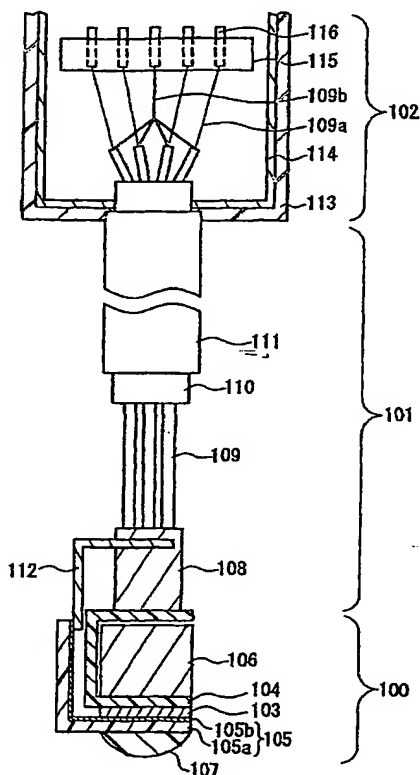
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- (51) 国際特許分類: A61B 8/00 (72) 発明者; および
(21) 国際出願番号: PCT/JP2004/004045 (75) 発明者/出願人 (米国についてのみ): 武田 潤一 (TAKEDA, Junichi). 小澤 仁 (OZAWA, Masashi).
(22) 国際出願日: 2004 年 3 月 24 日 (24.03.2004) (74) 代理人: 特許業務法人池内・佐藤アンドパートナーズ (IKEUCHI SATO & PARTNER PATENT ATTORNEYS); 〒5306026 大阪府大阪市北区天満橋1丁目8番30号OAPタワー26階 Osaka (JP).
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[続葉有]

(54) Title: ULTRASONIC PROBE

(54) 発明の名称: 超音波探触子



(57) Abstract: An ultrasonic probe comprises an ultrasonic element for transmitting/receiving an ultrasonic signal, a signal line for transmitting an electric signal from/to the ultrasonic element, and a ground line for supplying a ground potential to the ultrasonic element. A sensor signal substrate and a sensor ground substrate are electrically connected to the ultrasonic element and further electrically connected through a cable substrate to the signal line and ground line respectively. The sensor ground substrate is connected directly or through a relay ground substrate to the cable substrate.

(57) 要約: 本発明の超音波探触子は、超音波信号を送受信する超音波素子と、前記超音波素子へ、または前記超音波素子から電気信号を伝送する信号ラインと、前記超音波素子にグランド電位を供給するグランドラインとを備える。前記超音波素子には、センサ信号基板およびセンサグランド基板が電気的に接続されており、前記両基板は、ケーブル基板を介して、それぞれ、前記信号ラインおよび前記グランドラインと電気的に接続されている。また、前記センサグランド基板と前記ケーブル基板とは、直接接続されるか、または、中継グランド基板を介して接続されている。

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/004045

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl⁷ A61B8/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
Int.Cl⁷ A61B8/00-8/15Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Jitsuyo Shinan Koho 1922-1996 Toroku Jitsuyo Shinan Koho 1994-2004
Kokai Jitsuyo Shinan Koho 1971-2004 Jitsuyo Shinan Toroku Koho 1996-2004

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 69188/1988 (Laid-open No. 172800/1989) (Fujitsu Ltd.), 07 December, 1989 (07.12.89), Full text; all drawings (Family: none)	1-8
Y	JP 2001-54194 A (Olympus Optical Co., Ltd.), 23 February, 2001 (23.02.01), Full text; all drawings (Family: none)	1-8

☒ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

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"P" document published prior to the international filing date but later than the priority date claimed

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
20 May, 2004 (20.05.04)Date of mailing of the international search report
08 June, 2004 (08.06.04)Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/004045

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	JP 11-347032 A (Matsushita Electric Industrial Co., Ltd.), 21 December, 1999 (21.12.99), Full text; all drawings (Family: none)	8 1-7
A	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 69334/1987 (Laid-open No. 179000/1988) (Toray Industries, Inc.), 18 November, 1988 (18.11.88), Full text; all drawings (Family: none)	1-8
A	JP 59-189834 A (Olympus Optical Co., Ltd.), 27 October, 1984 (27.10.84), Full text; all drawings (Family: none)	1-8
A	JP 11-501245 A (Endosonics Corp.), 02 February, 1999 (02.02.99), Full text; all drawings & WO 97/23865 A1	1-8
A	JP 2001-276078 A (Matsushita Electric Industrial Co., Ltd.), 09 October, 2001 (09.10.01), Full text; all drawings (Family: none)	1-8
T	JP 2003-265470 A (Matsushita Electric Industrial Co., Ltd.), 24 September, 2003 (24.09.03), Full text; all drawings (Family: none)	1-8